

Section VI - Accidental Release Measures

Small Spill: Neutralize acid spill with alkali such as soda ash, sodium bicarbonate, limestone or lime. Absorb material with an inert material such as sand, vermiculite, diatomaceous earth or other absorbant material and place in chemical waste container to be disposed at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal. Adequate ventilation is required for soda ash due to the release of carbon dioxide gas. No smoking in spill area.

Large Spill: Contain spill with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining spill with an inert material such as sand, vermiculite or other absorbant material and place in chemical waste container to be disposed at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal. Neutralize residue with alkali such as soda ash, sodium bicarbonate, limestone or lime. Adequate ventilation is required for soda ash due to the release of carbon dioxide gas. No smoking in spill area.

Release Notes: If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802. In case of accident or road spill notify: CHEMTREC IN USA at 800-424-9300; CANUTEC in Canada at 613-996-6666 CHEMTREC in other countries at(International code)+1-703-527-3887.

Comments: See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

Section VII - Handling and Storage

Ventilation: Use with adequate ventilation.

Handling: Use appropriate personal protective equipment as specified in Section VIII. Avoid contact with skin and eyes. Avoid inhalation and ingestion.

Storage: Store in unopened container in cool, well ventilated area, away from potential sources of heat and fire. Keep away from combustible materials, strong bases and metals. Large storage tanks should be bermed and electrically grounded. Avoid using unprotected steel containers.

Section VIII - Exposure Controls/ Personal Protection

Engineering Controls: Good ventilation should be sufficient to control airborne levels.

Personal Protection:

Eye Protection: Wear chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent) when eye and face contact is possible due to splashing or spraying of material.

Protective Clothing: Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots and chemical safety goggles plus a face shield.

Respiratory Protection: Wear NIOSH approved respiratory protective equipment when vapor or mists may exceed applicable concentration limits.

Other Protective Clothing or Equipment: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Section IX - Physical and Chemical Properties

Appearance/Color/Odor: Clear, colorless liquid with no odor.

Melting Point/Range: -17.5°C (75% H₃PO₄)
4.6°C (80% H₃PO₄)

Solubility in Water: Complete

Specific Gravity: 1.5-1.6 @ 25°C/15.5°C

Vapor Density: Not Applicable

Bulk Density: 13 lbs/gal

pH: 1-1.5 at 1-10 g/L

Viscosity: 12-33 cp @ 20°C,
7.2-16 cp @ 40°C

Boiling Point/Range: 121-144°C

Vapor Pressure (mmHg): 11-4 mm Hg @ 25°C

Molecular Weight: 98

%Volatiles: Not Applicable

Evaporation Rate: Not Applicable

Section X - Stability and Reactivity

Stability:	This product is stable under normal conditions of storage, handling and use.
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	High temperatures
Materials to Avoid (Incompatibilities):	Bases, aluminum, copper, mild steel, brass and bronze
Hazardous Decomposition Products:	Phosphorus oxides and/or phosphine from thermal decomposition and hydrogen gas from reaction with metals.

Section XI - Toxicological Information

Significant Routes of Exposure:	Eyes, Digestive Tract, Respiratory System, Skin
Toxicity to Animals:	<p>Acute Oral Toxicity: LD₅₀ (rat): 1,530 mg/kg</p> <p>Acute Dermal Toxicity: LD₅₀ (rabbit): >1,260 to > 3,160 mg/kg</p> <p>Acute Inhalation Toxicity: LC₅₀ (guinea pig, mouse, rat, rabbit): 61-1,689 mg/m³</p> <p>Bacterial Genetic Toxicity In-Vitro: Negative</p> <p>Toxicity to Reproduction: 375 mg/kg bw did not affect offspring growth in rats.</p>
Special Remarks on Toxicity to Animals:	Not found to be toxic by oral and dermal exposure as defined by OSHA. Highly toxic by inhalation as defined by OSHA.
Other Effects on Humans:	No human data are available for this product.
Special Remarks on Chronic Effects on Humans:	None
Special Remarks on Other Effects on Humans:	None

Section XII - Ecological Information

Ecotoxicity:	<p>Acute toxicity to Fish: 96 hour LC₅₀: 3.0-3.5 mg/L</p> <p>Acute Toxicity to Daphnia: Survival rate depends on pH</p>
Environmental Fate:	Phosphoric acid undergoes ionic dissociation in water.
Toxicity:	Moderately toxic to aquatic organisms as defined by USEPA.
Degradation Products:	While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

Section XIII - Disposal Considerations

Product Disposal:	Dispose of waste at an appropriate waste disposal facility according to applicable laws and regulations. Neutralize with lime or other base. Collect in appropriate containers. Dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations and product characteristics at time of disposal.
General Comments:	None.

Section XIV - Transportation Information

	USDOT	TDG - Canada
Proper Shipping Name:	Phosphoric Acid	Phosphoric Acid
Hazard Class:	8	8
Identification Number:	UN1805	UN1805
Packing Group (Technical Name):	III	III, RQ
Labeling/ Placarding:	Corrosive	Corrosive

Authorized Packaging: Rail: DOT 111A Rubber lined
Truck: MC303, 304, 306, 307, 310, 311, 312, DOT 407, 412 Stainless Steel (Corrosive Resistant or protected) (Phosphoric acid weighs 13.5 to 16.5 lbs/gallon, cargo tanks must specify that such tanks are designed to handle the maximum lading density for these products)

Notes: TDG Note (Canada): Contains Phosphoric Acid which becomes a subsidiary class 9.2 when shipped in quantities over 300 kg per container. If product exceeds the CERCLA Reportable Quantity, the notation "RQ" shall be added before or after the basic shipping description.

European Transportation: ADR/RID Hazard Classification: 8 ADR/RID Item Number: 17°C
U.S. Custom Harmonization Number: 2809.20.00.30

Section XV - Regulatory Information

UNITED STATES:

SARA Hazard Category: This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
Fire: No **Pressure Generating:** No **Reactivity:** No **Acute:** Yes **Chronic:** No
40 CFR Part 355 - Extremely Hazardous Substances: None
40 CFR Part 370 - Hazardous Chemical Reporting: Applicable
All intentional ingredients listed on the TSCA Inventory.

SARA Title III Information: This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical	CAS No.	Percent by Weight	CERCLA RQ (lbs.)	SARA (1986) Reporting		
				311	312	313
Phosphoric Acid	7664-38-2	65-80	5,000	Yes	Yes	No

CERCLA/Superfund, 40 CFR Parts 117,302: If this product contains components subject to substances designated as **CERCLA Reportable Quantity (RQ) Substances**, it will be designated in the above table with the **RQ** value in pounds. If there is a release of **RQ Substance** to the environment, notification to the National Response Center, Washington D.C. (1-800-424-8802) is required.

CANADA:

WHMIS Hazard Symbol and Classification: This product is WHMIS controlled Category D1a, E
Ingredient Disclosure List: This product does contain ingredient(s) on this list.
Environmental Protection: All intentional ingredients are listed on the DSL (Domestic Substance List).

Section XVI - Other Information

NFPA Hazard Rating: Health 3 Fire 0 Reactivity 0 Special Hazards _____
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

Comments: None

Section(s) changed since last revision: All, New Format

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